Transcript Exhibit(s)

Docket #(s): RR-03639A-07-0610

Exhibit # : A1, S1

CITY OF ELOY
ARIZONA

OFFICE OF THE CITY MANAGER

April 14, 2008

David Raber, Director
Arizona Corporation Commission
Railroad Safety Section
1200 West Washington Street
Phoenix, AZ 85007

RE: Union Pacific RR-03639A-07-0610

Dear Mr. David Raber:

The City of Eloy and the communities adjacent to the Union Pacific Railroad are collectively addressing issues associated with the double track project. A Rail Corridor Study group was formed to work with Union Pacific throughout the process.

At this time, the City of Eloy supports UPRR's application to modify the public crossings at Toltec Road, Houser Road, Battaglia Road, Eleven Mile Road, Main Street, and Sunshine Boulevard as part of the double track project.

The Cities of Casa Grande, Eloy, and Maricopa and Pinal Government are meeting regularly with UPRR to develop ways to resolve rail-related issues. If necessary, I can be reached at 520-466-9201 or via electronic mail at jblanton@ci.eloy.az.us.

Sincerely,
CITY OF ELOY

Joseph Blanton, AICP
Interim City Manager/Community Development Director

ARIZONA CORPORATION COMMISSION

Director, Safety Division

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ORIGINAL

Staff Memorandum

To: THE COMMISSION

DOCKET NO. RR-03639A-07-0610

From: Safety Division

Date: March 21, 2008

RE: IN THE MATTER OF THE APPLICATION OF THE UNION PACIFIC RAILROAD COMPANY TO ALTER SIX CROSSINGS OF THE UNION PACIFIC RAILROAD IN THE CITY OF ELOY, PINAL COUNTY ARIZONA, AT TOLTEC ROAD, HOUSER ROAD, BATTAGLIA ROAD, ELEVEN MILE CORNER ROAD, MAIN STREET, AND SUNSHINE BOULEVARD.

Background

On October 19, 2007, the Union Pacific Railroad Company ("Railroad") filed with the Arizona Corporation Commission ("Commission") an application for approval for the Railroad to alter six crossings of the Railroad in Pinal County ("County"), Arizona by adding a second set of mainline tracks. All six of the crossings are in the City of Eloy ("Eloy") as follows: Toltec Road, AAR/DOT No. 741-375-H; Houser Road, AAR/DOT No. 741-376-P; Battaglia Road, AAR/DOT No. 741-377-W; Eleven Mile Corner Road, AAR/DOT No. 741-707-A; Main Street, AAR/DOT No. 741-708-G; and Sunshine Boulevard, AAR/DOT No. 741-709-N. Commission Safety Division Staff ("Staff") issued data requests and those data requests and the Railroads responses (without attachments) are included as attachments to this memorandum.

Union Pacific's filing in this application requests approval for the Railroad to add a second main track, twenty feet from the center of the existing main track at six crossings in the jurisdiction of the City of Eloy (Toltec, Houser, Battaglia, Eleven Mile Corner, Main Street and Sunshine Roads). This application is part of the Railroad's double tracking effort for their Sunset Route across Arizona.

On February 22nd, and 23rd, 2007, Staff, the Railroad, the City of Eloy, and Pinal County, participated in diagnostic reviews of the proposed improvements at all six of the crossings in this application. All parties present were in agreement to the proposed improvements at the previously mentioned crossings. The following is a break down of each of the six crossings in this application, including information about each crossing that was provided to Staff by the Railroad and its contractors.

Geographical Information

The crossings in this application are in the vicinity of Eloy, Arizona and cross both the UPRR line and the Casa Grande/Picacho Highway (which runs from Casa Grande into and through Eloy parallel to the rail line). As the Casa Grande/Picacho highway nears and enters the town of Eloy, the name of the roadway changes to Frontier Street. Toltec Road is the furthest west of the crossings in this application and located just west of the center of Eloy. Toltec Road does have an interchange point with I-10. From Toltec Road, Houser Road is the next crossing to the east, 1.6 miles east of Toltec Road. Houser Road does not directly interchange with I-10, but connects with Toltec Road south of the rail line to access I-10. From Houser Road, Battaglia Road is the next crossing to the east. There is no interchange with I-10 from Battaglia, although Battaglia crosses over I-10. Further to the east, is the 11 Mile Corner Road crossing. There is no direct interchange with I-10 from this street. Main Street is the next crossing to the east. Main Street runs though the center of Eloy and has no interchange with I-10. On the north side of the tracks on Main Street are numerous businesses and town offices, as well as several schools. The final crossing in this application east of Main Street is Sunshine Boulevard, .30 miles away. There is a direct interchange with I-10 from Sunshine Boulevard. Sunshine Boulevard forms the eastern boundary of Eloy. The distance from the farthest west crossing in this application (Toltec Road) to the farthest east crossing (Sunshine Boulevard) is 4.98 miles. For a map of the area, see Appendix A of this staff report.

Toltec Road

The proposed second main track at this crossing will be located south of the existing main track. The Railroad will re-profile a portion of the two lane rural asphalt road to meet the new tracks. The Railroad will also upgrade the existing warning equipment with new 12' LED flashing lights, gates and bells as well as a new concrete crossing surface and replace any impacted pavement markings. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state.

Traffic data for Toltec Road was provided to the Railroad by Joe Blanton, City of Eloy, Interim Manager. Data provided shows the Average Daily Traffic (ADT) for 2006 to be 2853 vpd. Data provided shows the estimated ADT for 2030 to be 45,319. The current Level of Service ("LOS") for this two lane road is LOS A, for both north and south bound traffic.

Note: The American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets, 2004, states

that the Level of Service characterizes the operating conditions on a facility in terms of traffic performance measures related to speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. This is a measure of roadway congestion ranging from LOS A--least congested--to LOS F--most congested. LOS is one of the most common terms used to describe how "good" or how "bad" traffic is projected to be.

The posted speed limit on Toltec Road is 25 MPH. Commission Rail Safety Section, as well as Federal Railroad Administration ("FRA") accident/incident records indicate one accident on Toltec Road on 9/19/2007. No injuries or fatalities have occurred at this crossing. Flashing lights and automatic gates were first installed at this crossing in 1974, by Commission Order No. 44198.

Alternative routes from this crossing are as follows; to the west 3.72 miles to Sunland Gin Road, and to the east 1.64 miles to Houser Road.

The estimated cost of the proposed railroad crossing upgrade is $265,296. The Railroad is paying for the entire cost of the crossing improvements, broken down by signal and crossing surface work, with the signal work costing $218,976 and the crossing surface $46,320.

Houser Road

The proposed second main track at this crossing will be south of the existing main track. The Railroad will re-profile a portion of the two lane rural asphalt road to meet the new track. The Railroad will also upgrade the existing warning equipment with new 12' LED flashing lights, gates and bells as well as a new concrete crossing surface. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state.

Traffic data provided by Joe Blanton, Interim City Manager, estimates the Average Daily Traffic ("ADT") for this crossing to be 870 vpd. Projected ADT for this crossing in the year 2025 is 48,090. The current Level of Service ("LOS") for the two lane road is LOS A, for both north and south bound traffic.

The posted speed limit on this road is 45 MPH. Commission Rail Safety Section, as well as Federal Railroad Administration ("FRA") accident/incident records indicate one accident at this crossing on 5/22/2006, with one injury and no fatalities. Flashing lights and automatic gates were first installed at this crossing in 1977, by Commission Order No. 48284.

Alternative routes from this crossing are as follows; to the west 1.64 miles to Toltec Road, and to the east 1.67 miles to Battaglia Road, both are at-grade crossings.

The estimated cost of the proposed railroad crossing upgrade is $267,296. The Railroad is paying for the entire cost of the crossing improvements, broken down by signal and crossing surface improvements, with the signal improvements costing $ 220,976, and the crossing surface $46,320.

Battaglia Road

The proposed second main track at this crossing will be located north of the existing main track. The Railroad will re-profile a portion of the two lane rural asphalt road to meet the new track. The Railroad will also upgrade the existing warning equipment with new 12' LED flashing lights, gates and bells as well as a new concrete crossing surface. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state.

Traffic data provided by Joe Blanton, Interim City Manager of Eloy, estimates the Average Daily Traffic ("ADT") for this crossing to be 2,774 vpd. This count was taken in 2005. The projected ADT for the year 2025 is 33,809 vpd. The current Level of Service ("LOS") for the two lane road is LOS A, for both north and south bound traffic.

The posted speed limit is 40 MPH. Commission Rail Safety Section, as well as Federal Railroad Administration ("FRA") accident/incident records indicate one accident at this crossing, with one fatality on 4/17/1983. Flashing lights and automatic gates were first installed at this crossing in 1977, by Commission Order No. 48285.

Alternative routes from this crossing are as follows; to the west 1.67 miles to Houser Road, and to the east .45 miles to Eleven Mile Road, both are at-grade crossings.

The estimated cost of the proposed railroad crossing upgrade is $253,626. The Railroad is paying for the entire cost of the crossing improvements, broken down by signal and crossing surface improvements, with the signal work costing $ 222,746, and the crossing surface $30,880.

Eleven Mile Corner Road

The proposed second main track at this crossing will be north of the existing main track and siding. The Railroad will re-profile a portion of the two lane asphalt road to meet the new track. The Railroad will also upgrade the existing warning equipment with new 12' LED flashing lights, gates, bells, new concrete crossing surface. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state.

Traffic data provided by Joe Blanton, Interim City Manager of Eloy, estimates the Average Daily Traffic ("ADT") for this crossing to be 1749 vpd. Projections for ADT for the year 2025 are 46,872 vpd. The current Level of Service ("LOS") for the two lane road is LOS A, for both north and south bound traffic.

The posted speed limit on this road is 25 MPH. Commission Rail Safety Section, as well as Federal Railroad Administration ("FRA") accident/incident records indicate two accidents at this crossing, with no injuries or fatalities. They happened on 6/27/1982 and 10/2/2005. Flashing lights and automatic gates were first installed in 1982 by Commission Order No. 52759.

Alternative routes from this crossing are as follows; to the west .45 miles to Battaglia Road, and to the east .91 miles to Main Street.

The estimated cost of the proposed railroad crossing upgrade is $265,600. The Railroad is paying for the entire cost of the crossing improvements, broken down by signal and crossing surface improvements, with the signal improvements costing $ 227,000, and the crossing surface $38,600.

Main Street

The proposed second main track at this crossing will be north of the existing main track. The Railroad will re-profile a portion of this four lane urban asphalt road to meet the new track. The Railroad will also upgrade the existing warning equipment with new 12' LED flashing lights, gates, bells, new concrete crossing surface. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state.

Traffic data provided by Joe Blanton, Interim City Manager of Eloy, estimates the Average Daily Traffic ("ADT") for this crossing to be 3,776 vpd. The projected ADT for the year 2016 shows the ADT to be 4,834. The current

Level of Service ("LOS") for the two lane road is LOS A, for both north and south bound traffic.

The posted speed limit on this road is 25 MPH. Commission Rail Safety Section, as well as Federal Railroad Administration ("FRA") accident/incident records indicate two accidents at this crossing, with two injuries and one fatality. The first accident happened on 1/1/1997, and the second with the fatality on 3/10/2007. Flashing lights and automatic gates were first installed at this crossing in 1975, with Commission Order No. 45052.

Alternative routes from this crossing are as follows; to the west .91 miles to Eleven Mile Road, and to the east .31 miles to Sunshine Road.

The estimated cost of the proposed railroad crossing upgrade is $415,856. The Railroad is paying for the entire cost of the crossing improvements, broken down by signal and crossing surface improvements, with the signal improvements costing $ 307,776, and the crossing surface $108,080.

Sunshine Boulevard

The proposed second main track at this crossing will be north of the existing main track. The Railroad will re-profile a portion of this four lane urban asphalt road to meet the new track. The Railroad will also upgrade the existing warning equipment with new 12' LED flashing lights, gates, bells, cantilevers and new concrete crossing surface. The proposed measures are consistent with safety measures employed at similar at-grade crossings in the state.

Traffic data provided by Joe Blanton, Interim City Manager of Eloy, estimates the Average Daily Traffic ("ADT") for this crossing to be 3,063 vpd. The projected ADT for the year 2025 shows the ADT to be 51,714. The current Level of Service ("LOS") for the two lane road is LOS A, for both north and south bound traffic.

The posted speed limit on this road is 35 MPH. Commission Rail Safety Section, as well as Federal Railroad Administration ("FRA") accident/incident records indicate one accident at this crossing, with one fatality on 10/18/1975. Flashing lights, automatic gates and bells were installed at this crossing in 2000, in Commission Order No. 62302.

Alternative routes from this crossing are as follows; to the west .31 miles to Main Street, and to the east 2.52 miles to State Route 87.

The estimated cost of the proposed railroad crossing upgrade is $470,098. The Railroad is paying for the entire cost of the crossing improvements, broken down by signal and crossing surface improvements, with the signal improvements costing $ 377,458, and the crossing surface $92,640.

Train Data

Data provided by the railroad regarding train movements through these six crossings are as follows, and are the same for all six crossings:
Train Count: 48 total average trains per day (46 freight, and 2 passenger trains)
Train Speed: 79 mph passenger / 70 mph freight
Thru Freight/Switching Moves: All train movements through these six crossings are thru movements with no switching operations, according to Union Pacific, Manager of Train Operations, Rob Henderson. These crossings are used by Amtrak twice per day, three times per week

Schools and Bus Routes

Information about schools, and school buses, in the area was provided by, Jennifer Crumbliss and Juan Cruz of HDR Engineering. There are several schools in Pinal County and within the City of Eloy. They are as follows:

Santa Cruz High School @ 900 N. Main Street, Eloy, AZ 85231
Toltec Elementary School @ 3315 N Toltec Road, Eloy, AZ 85231
Toltec Middle School @ 12115 W Benito Drive, Eloy, AZ 85223.
Youth Haven Desert Ranch @ 16848 S.Vail Road, Picacho, AZ 85241
Picacho Schools (K-8) @ 17865 S. Vail Road, Picacho, AZ 85241

The buses, combined cross Toltec Road 19 times, Houser Road 11 times, Battaglia Road 13 times, Eleven Mile Corner Road 9 times, Main Street 13 times, and Sunshine Boulevard 13 times per day during the week, on average.

Hazardous Materials

The railroad gave the following response when asked about hazardous materials crossing these six crossings:

Union Pacific has been unable to obtain any information responsive to this request. It is Union Pacific's understanding that any vehicle carrying hazardous materials may utilize public crossings unless otherwise posted, but

Union Pacific knows of no way it can investigate or determine whether such vehicles use these crossings or with what frequency.

Hospitals

The nearest hospital to these crossings is Casa Grande Hospital (approximately 10 miles west of Toltec Road) and NW Medical Center in Marana (approximately 38 miles east of Sunshine Blvd.). To our knowledge, none of these crossings are used extensively by emergency service vehicles.

Zoning

Staff requested the Railroad provide information regarding the type of zoning in adjacent areas from the crossing. The following was their response:

Union Pacific believes that the second part of CW 1.7 calls for speculation as to whether new housing developments, industrial parks, or other developments will occur in the future. In addition, Union Pacific does not have access to such information, but instead must rely on information provided by others. With those caveats, Union Pacific responds as follows:

Pinal County has a 2006 Land Use Map that matches the field diagnostic observations. The observed land use from the field diagnostics are shown below:

Crossing	*2007 Observed Land Use*	*2006 Pinal County Land Use*
Toltec Road	*Commercial & Industrial*	*Corridor Mix*
Houser Road	*Agricultural*	*Corridor Mix*
Battaglia Road	*Commercial & Industrial*	*Corridor Mix*
Eleven Mile Corner Road	*Commercial & Industrial*	*Corridor Mix*
Main Street	*Residential & Commercial*	*Corridor Mix*
Sunshine Blvd	*Residential & Commercial*	*Corridor Mix*

Pinal County planning departments can better answer the question of future developments. They review development impact studies and regulate zoning.

Spur Lines

The Union Pacific gave the following answer regarding spur lines located in the area:

Using the definition of a "spur line" or "spur track" as "a stub track of indefinite length diverging from a main track or other track," ACC Regulation R14-5-101(20), no spur lines have been removed within the last three years inside a 10-mile radius of any crossings covered in this application.

Source: Union Pacific's Engineering

Vehicular Delays at Crossings

Based on the current single track configuration, the railroad gave the following response about delay time for vehicles at the crossing in this application. The delay time is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:

Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at the crossing involved in this application operate at timetable speeds of 65 mph and the average length of trains is approximately 6,000 feet. At that train length and speed, the average delay for vehicular traffic (1) to allow the train to pass at this crossing, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is approximately 1.549 minutes.

The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the

blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.

With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.

Source: Union Pacific's engineering, in consultation with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110

Based on the railroads double tracking project, and the projected number of 84 trains per day through this crossing by the year 2016, the railroad gave this response as to what future delay times would be for vehicles at the crossings in this application.

Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:

Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at the crossing involved in this application are projected to operate at timetable speeds of 65 mph and the average length of trains is projected to be approximately 8,000 feet. At that train length and speed, the average delay for vehicular traffic at this crossing in 2016 (1) to allow the train to pass at the crossing, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is projected to be approximately 1.899 minutes.

The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and

the warning devices are reset, varies according to the condition creating the blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.

With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.

Source: Union Pacific's Engineering, in consultation with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110

Grade Separation

With regard to grade separating any of the crossings, the Railroad gave the following response:

Union Pacific understands that whether a grade separation is needed is primarily a question of mobility and convenience for vehicular traffic on the roadway, not safety. That is because an at-grade crossing can be safe without constructing a grade separation and eliminating the grade crossing. Based on this understanding, Union Pacific believes the question of whether a grade separation is needed is irrelevant to Union Pacific's application to add a second mainline track at these grade crossings. With that caveat, Union Pacific responds as follows:

In addition to the foregoing, grade separation is not appropriate for determination at this time because the local communities and roadway authorities have not finally determined whether grade separations at these crossings are desired by those communities and authorities, what priority grade separations would have with respect to other public projects, when construction of grade separations could be begun and finished, and how grade separations would be funded. Union Pacific is aware that the local communities and

roadway authorities are studying these matters outside of the context of Union Pacific's applications for grade crossing alterations.

Furthermore, Union Pacific believes the six crossings involved in this application are safe without constructing grade separations. This conclusion is supported by the fact that the Federal Highway Administration authorizes the use of gates and lights at multiple-track grade crossings as proposed in this application.

Exposure Index

Utilizing the Exposure Index (the product of daily road traffic and the daily number of trains as a simplified method or "quick check" to indicate the potential for a grade separation) described in the report Grade Separations – When Do We Separate? by Nichelson and Reed (this report was provided to Commissioner's Offices on June 22, 2007), Staff have determined the following for this crossing:

Street Name	Year	Average Daily Traffic	Average Daily Trains	Exposure Index
Toltec Road	2006	2853	48	136,944
	2030	45,319	84	3,806,796
Houser Road	2006	870	48	41,760
	2025	48,090	84	4,039,560
Battaglia Road	2005	2774	48	133,152
	2025	33,809	84	2,839,956
11 Mile Corner Road	2006	1,749	48	83,952
	2025	46,872	84	3,937,248
Main Street	2006	3,776	48	181,248
	2016	4,834	84	406,056
Main Street	2005	3,063	48	147,024
	2025	51,714	84	4,343,976

The authors of the above-referenced report state that, "when a predetermined value of the index is reached, further investigation is triggered. Examples of predetermined values range in one state from 15,000 for rural conditions to 30,000 for urban conditions, in another from 50,000 for roads on the state highway system to 100,000 for all other roads, and in a third, by speed (15,000 for rural conditions where roadway vehicle speeds are greater than 50 MPH)." The report further indicates that, "investigation described in this section

has shown this method is quick, easy, and sufficiently accurate to represent an adequate initial or general screening tool to be used prior to proceeding with more detailed technical analysis."

While Staff agrees, the Exposure Index should not be used as the sole decision-making tool for determining the appropriateness of a grade separation, we note that future Exposure Index's seem high, and may warrant further investigation of grade separation of these crossing in the future by all parties involved.

The FWHA Railroad – Highway Grade Crossing Handbook (revised Second Edition August 2007, Section 5) states that highway-rail grade crossings should be considered for grade separation or otherwise eliminated across the railroad right of way whenever the crossing exposure exceeds 250,000 in rural areas. All crossings included in this application are currently below the threshold identified in this source.

Pinal County Support

According, to a letter dated January 9, 2008 written by David Snider, Chairman, Pinal County Board of Supervisors, Pinal County is in full support of Union Pacific's double track project. Specifically, Pinal County fully supports and approves Union Pacific's construction of one additional main track over and across public roadway crossings of the Union Pacific tracks within Pinal County. Additionally, the letter requests the Arizona Corporation Commission approve each application filed by Union Pacific for authority to install a second main track, at grade, for all crossings within Pinal County.

Having reviewed all applicable data, Staff supports the Railroads application. Staff believes that the upgrades are in the public interest and are reasonable. Therefore, Staff recommends approval of the Railroads application.

Dave Raber
Director
Safety Division

Brian H. Lehman
Railroad Supervisor
Safety Division

PINAL COUNTY
BOARD OF SUPERVISORS

CHRIS WATSON

TERRY DOOLITTLE
County Manager

January 9, 2008

RR 03639A-07-0610

Mr. David Raber
Director, Safety Division
Arizona Corporation Commission
2200 North Central Avenue
Suite 300
Phoenix, Arizona 85004

Re: Support for Union Pacific Railroad Company's Double-Track Project

Dear Mr. Raber:

This letter will serve to inform you that Pinal County fully supports Union Pacific Railroad Company's project to construct a second main line railroad track through Pinal County and the State of Arizona, known as "Union Pacific's Double-Track Project." Specifically, Pinal County fully supports and approves, and will to cooperate with Union Pacific concerning, construction of one additional main track over and across public roadway crossings of the Union Pacific Railroad tracks at grade within Pinal County, as listed on Exhibit A attached hereto. Pinal County therefore requests that the Arizona Corporation Commission approve each application filed by Union Pacific for authority to install a second main line railroad track at grade at those crossings listed on Exhibit A.

If it would be helpful to the Commission or its Staff, Pinal County would be pleased to have its representative appear at any hearings or meetings concerning Union Pacific's crossing alteration applications to the Commission to confirm the County's support and approval of those applications. If you have any questions or wish to discuss the County's position with respect to these matters, please do not hesitate to contact me.

Sincerely,

David Snider

David Snider, Chairman

c: Board of Supervisors
Ken Buchanan, Assistant County Manager
for Development Services
Chief Civil Deputy County Attorney, Chris Roll

DIRECTOR

ARIZONA CORPORATION COMMISSION
UNION PACIFIC'S RESPONSES TO FIRST SET OF DATA REQUESTS
DOCKET NO. RR-03639A-07-0610
Toltec Road, Houser Road, Battaglia Road, Eleven Mile Corner Road, Main Street, and Sunshine Blvd in Eloy, AZ
FEBRUARY 20, 2008

CW 1.1 Provide Average Daily Traffic Counts ("ADT") for each of the [six] locations.

Response: Union Pacific Railroad Company ("Union Pacific") must rely on information provided by others to provide ADT's. With that caveat, Union Pacific responds as follows:

Crossing	*Current ADT*	*Source*
Toltec Road	*2,853*	*Traffic Count provided by Joe Blanton, City of Eloy, Interim Manager*
Houser Road	*870*	*Traffic Count provided by Joe Blanton, City of Eloy, Interim Manager*
Battaglia Road	*2,774*	*Traffic Count provided by Joe Blanton, City of Eloy, Interim Manager*
Eleven Mile Corner Road	*1,749*	*Traffic Count provided by Joe Blanton, City of Eloy, Interim Manager*
Main Street	*3,776*	*Traffic Count provided by Joe Blanton, City of Eloy, Interim Manager*
Sunshine Blvd	*3,063*	*Traffic Count provided by Joe Blanton, City of Eloy, Interim Manager*

Source: 1) Jennifer Crumbliss, HDR Engineering, 8404 Indian Hills Drive, Omaha, NE 68114.
2) Joe Blanton, City of Eloy, Interim City Manager, City of Eloy, 628 N. Main Street, Eloy, AZ 85231 (Emailed Traffic Counts)

CW 1.2 Please describe the current Level of Service ("LOS") at each intersection.

Response: Union Pacific believes that the level of service analysis is concerned with mobility rather than safety. In addition, Union Pacific must rely on information provided by others to calculate the level of service. With those caveats, Union Pacific responds as follows:

Crossing	*LOS*
Toltec Road	*Northbound (LOS=A), Southbound (LOS=A)*
Houser Road	*Northbound (LOS=A), Southbound (LOS=A)*
Battaglia Road	*Northbound (LOS=A), Southbound (LOS=A)*
Eleven Mile Corner Road	*Northbound (LOS=A), Southbound (LOS=A)*
Main Street	*Northbound (LOS=A), Southbound (LOS=A)*
Sunshine Blvd	*Northbound (LOS=A), Southbound (LOS=A)*

Source: *Traffic level of service calculations were performed using Synchro and SimTraffic programs under the direction of Heidi Schneider with HDR Engineering, Inc at 5210 E Williams Circle, Suite 503, Tucson, AZ 85711, (520) 584-3600. The train delay times utilized in the analysis were provided by Tom Domres, with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110 via Union Pacific.*

CW 1.3 Provide any traffic studies done by the road authorities for each area.

Response: *1) The 2007 Pinal County Comprehensive Plan on http://www.co.pinal.az.us/PlanDev/PDCP/CPInfo.asp*
2) 2006 Pinal County SATS (Small Area Transportation Study) on http://www.co.pinal.az.us/PubWorks under "Downloads"
3) 2007 Final City of Casa Grande SATS on http://www.ci.casa-grande.az.us/dev_center/development_center.php

CW 1.4 Provide distances in miles to the next public crossing on either side of the proposed project location. Are any of these grade separations?

Response: *Union Pacific believes that the last question in CW 1.4 raises an issue that is irrelevant, namely, whether either of the next public crossings is a grade separation. With that caveat, Union Pacific responds as follows:*

Crossing	*TO THE WEST*	*TO THE EAST*
Toltec Road	*3.72 miles to Sunland Gin*	*1.64 miles to Houser Road*
Houser Road	*1.64 miles to Toltec Road*	*1.67 miles to Battaglia Road*
Battaglia Road	*1.67 miles to Houser Road*	*0.45 miles to Eleven Mile Rd*
Eleven Mile Corner Road	*0.45 miles to Battaglia Rd*	*0.91 miles to Main Street*
Main Street	*0.91 miles to Eleven Mile Rd*	*0.31 miles to Sunshine Blvd*
Sunshine Blvd	*0.31 miles to Main Street*	*2.52 miles to AZ 87 Hwy*

AZ 87 Hwy is the only adjacent crossing that is grade separated.

Source: *HDR's use of the Union Pacific Straight-line Diagrams and www.MapQuest.com.*

CW 1.5 How and why was grade separation not decided on at this time? Please provide any studies that were done to support these answers.

Response: *Union Pacific understands that whether a grade separation is needed is primarily a question of mobility and convenience for vehicular traffic on the roadway, not safety. That is because an at-grade crossing can be safe without constructing a grade separation and eliminating the grade crossing. Based on this understanding, Union Pacific believes the question of whether a grade separation is*

needed is irrelevant to Union Pacific's application to add a second mainline track at these grade crossings. With that caveat, Union Pacific responds as follows:

In addition to the foregoing, grade separation is not appropriate for determination at this time because the local communities and roadway authorities have not finally determined whether grade separations at these crossings are desired by those communities and authorities, what priority grade separations would have with respect to other public projects, when construction of grade separations could be begun and finished, and how grade separations would be funded. Union Pacific is aware that the local communities and roadway authorities are studying these matters outside of the context of Union Pacific's applications for grade crossing alterations.

Furthermore, Union Pacific believes the six crossings involved in this application are safe without constructing grade separations. This conclusion is supported by the fact that the Federal Highway Administration authorizes the use of gates and lights at multiple-track grade crossings as proposed in this application.

CW 1.6 If this crossing were to be grade separated, provide a cost estimate of the project.

Response: *Again, Union Pacific understands that whether a grade separation is needed is primarily a question of mobility and convenience for vehicular traffic on the roadway, not safety. That is because an at-grade crossing can be safe without constructing a grade separation and eliminating the grade crossing. Based on this understanding, Union Pacific believes the question of whether a grade separation is needed is irrelevant to Union Pacific's application to add a second mainline track at these grade crossings. In addition, any attempt to estimate the cost to construct a grade separation would be speculative in the absence of a detailed study of the particular crossing in question. With those caveats, Union Pacific responds as follows:*

In connection with its recent application to upgrade the crossing of Union Pacific tracks at the intersection of Power and Pecos Roads, RR-03639A-07-0398, the Town of Gilbert estimated that a grade separation at that location would cost $22 million. Depending on the particular crossing involved, a reasonable range for the costs of constructing a grade separation would be between $20 million and $40 million.

CW 1.7 Please describe what the surrounding areas are zoned for near this intersection. i.e. Are there going to be new housing developments, industrial parks, etc.?

Response: *Union Pacific believes that the second part of CW 1.7 calls for speculation as to whether new housing developments, industrial parks, or other developments will occur in the future. In addition, Union Pacific does not have access to such information, but instead must rely on information provided by others. With those caveats, Union Pacific responds as follows:*

Pinal County has a 2006 Land Use Map that matches the field diagnostic observations. The observed land use from the field diagnostics are shown below:

Crossing	*2007 Observed Land Use*	*2006 Pinal County Land Use*
Toltec Road	*Commercial & Industrial*	*Corridor Mix*
Houser Road	*Agricultural*	*Corridor Mix*
Battaglia Road	*Commercial & Industrial*	*Corridor Mix*
Eleven Mile Corner Road	*Commercial & Industrial*	*Corridor Mix*
Main Street	*Residential & Commercial*	*Corridor Mix*
Sunshine Blvd	*Residential & Commercial*	*Corridor Mix*

Pinal County planning departments can better answer the question of future developments. They review development impact studies and regulate zoning.

Source: *1) 2006 Pinal County SATS (Small Area Transportation Study) on http://www.co.pinal.az.us/PubWorks under "Downloads"*
2) The Central Arizona Association of Governments' Planning Department (CAAG) http://www.caagcentral.org/GIS/gishome.html

CW 1.8 Please supply the following: number of daily train movements through the crossing, speed of the trains, and the type of movements being made (i.e. thru freight or switching). Is this a passenger train route?

Response: *The movements are the same for these six crossings.*

Train Count: 48 total average trains per day (46 freight, 2 passenger)
Train Speed: 79 mph passenger / 70 mph freight
Thru Freight/Switching Moves: All moves through these six crossings are thru freight. (According to MTO Rob Henderson there are no switching moves at these crossings.)

These crossings are used by Amtrak twice per day, three times per week.

Source: *Union Pacific's Manager of Train Operations, Rob Henderson.*

CW 1.9 Please provide the names and locations of all schools (elementary, junior high and high school) within the area of the crossing.

Response:

There are several schools in Pinal County & the City of Eloy within the area of the six crossings in this application.

Santa Cruz High School @ 900 N. Main Street, Eloy, AZ 85231
Toltec Elementary School @ 3315 N Toltec Road, Eloy, AZ 85231
Toltec Middle School @ 12115 W Benito Drive, Eloy, AZ 85223.
Youth Haven Desert Ranch @ 16848 S.Vail Road, Picacho, AZ 85241
Picacho Schools (K-8) @ 17865 S. Vail Road, Picacho, AZ 85241

Source:

1) ***Jennifer Crumbliss, Senior Transportation Engineer with HDR, Engineering, Inc. at 8404 Indian Hills Drive, Omaha, NE 68114, (402) 926-7049 used the internet site www.GoggleEarth.com also,***
2) ***Juan Cruz, Roadway Designer with HDR in Tucson, physically verified hospital and school locations on June 14, 2007.***

CW 1.10 Please provide school bus route information concerning the crossing, including the number of times a day a school bus crosses this crossing.

Response: ***The buses, combined, cross Toltec Road 19 times, Houser Road 11 times, Battaglia Road 13 times, Eleven Mile Corner Road 9 times, Main Street 13 times, and Sunshine Blvd.13 times per day during the week, typically.***

Source:

1) ***Jesse Rosel, Transportation Director for Santa Cruz High School located at 900 N. Main Street, Eloy, AZ 85231, (520) 466-2200***
2) ***Linda Lawson, Admin Assistant for Toltec Elementary School located at 3315 N Toltec Road, Eloy, AZ 85231, (850) 466-2360***
3) ***Tom Williams, transportation staff for Villa Oasis School located at 3740 N. Toltec Road, Eloy, AZ 85231, (850) 466-9461***
4) ***Marilyn Lyman, Office Manager for Youth Haven Desert Ranch located at 16848 S. Vail Road, Picacho, AZ 85241, (520) 466-3093***
5) ***Juan Castillo, Director of Plan Operations for Picacho Schools located at 17865 S. Vail Road, Picacho, AZ 85241, (520) 466-7942***

CW 1.11 Please provide information about any hospitals in the area and whether the crossing is used extensively by emergency service vehicles.

Response: *The nearest hospital to these crossings is Casa Grande Regional Hospital (approximately 10 miles west of Toltec Road) and NW Medical Center in Marana (approximately 38 miles east of Sunshine Blvd). To our knowledge, none of these crossings is used extensively by emergency service vehicles.*

Source: *Jennifer Crumbliss, Senior Transportation Engineer with HDR, Engineering, Inc. at 8404 Indian Hills Drive, Omaha, NE 68114, (402) 926-7049 used the internet site www.GoggleEarth.com also, Juan Cruz, Roadway Designer with HDR in Tucson, physically verified hospital and school locations on June 14, 2007.*

CW 1.12 Please provide the total cost of improvements to each crossing.

Response:

Crossing	*Crossing Surface*	*Signal*	*Total*
Toltec Road	$ 46,320.00	$218,976.00	$265,296.00
Houser Road	$ 46,320.00	$220,976.00	$267,296.00
Battaglia Road	$ 30,880.00	$222,746.00	$253,626.00
Eleven Mile Corner Road	$ 38,600.00	$227,000.00	$265,600.00
Main Street	$108,080.00	$307,776.00	$415,856.00
Sunshine Blvd	$ 92,640.00	$377,458.00	$470,098.00

Source: *Union Pacific's Engineering.*

ORIGINAL AND THIRTEEN COPIES
of the foregoing filed this 20th day of
February, 2008, with:

Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

COPY of the foregoing hand-delivered
this 20th day of February, 2008, to:

Mr. David Raber
Mr. Brian Lehman
Mr. Chris Watson
Railroad Safety Section
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2200 North Central Avenue, #300
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Charles H. Hains, Esq.
Legal Division
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1200 West Washington Street
Phoenix, Arizona 85007

Dan Norkol

ARIZONA CORPORATION COMMISSION
UNION PACIFIC'S RESPONSES TO SECOND SET OF DATA REQUESTS
DOCKET NO. RR-03639A-07-0610
Toltec Road, Houser Road, Battaglia Road, Eleven Mile Corner Road,
Main Street, and Sunshine Boulevard, in Eloy, AZ
MARCH 14, 2008

CW 2.1 Based on the current single track configuration at the crossings specified by this application, please provide the current traffic blocking delay per train. Please indicate the time in which vehicular traffic is delayed (1) to allow the train to pass at a crossing and (2) due to trains stopped on the track for any purpose. The delay is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

Response: **Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:**

Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at the crossing involved in this application operate at timetable speeds of 65 mph and the average length of trains is approximately 6,000 feet. At that train length and speed, the average delay for vehicular traffic (1) to allow the train to pass at this crossing, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is approximately 1.549 minutes.

The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the blockage. These varied conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.

With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.

Source: **Union Pacific's Engineering, in consultation with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110**

CW 2.2 Based on anticipated double tracking at the crossings covered by this application and projected train traffic of 84 trains per day by 2016, please provide the projected (2016) blocking delay per train. Please indicate the time in which vehicular traffic is delayed (1) to allow the train to pass at a crossing and (2) due to trains stopped on the track for any purpose. The delay is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

Response: **Delays for vehicular (roadway) traffic caused by trains occupying a crossing depend on the length and speed of each train traversing the crossing. Because each train can be unique for these values it would be impossible for Union Pacific accurately to provide the time of delay for vehicular traffic either while allowing trains to pass the crossing or because trains are stopped in the crossing. With that caveat, Union Pacific responds as follows:**

Union Pacific operations are governed by maximum allowable speeds as identified by timetable. Trains at the crossing involved in this application are projected to operate at timetable speeds of 65 mph and the average length of trains is projected to be approximately 8,000 feet. At that train length and speed, the average delay for vehicular traffic at this crossing in 2016 (1) to allow the train to pass at the crossing, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, is projected to be approximately 1.899 minutes.

The average time vehicular traffic is delayed (2) due to trains stopped on the track for any purpose, measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset, varies according to the condition creating the blockage. These varied

conditions include mechanical failure such as a broken air hose, a grade crossing accident, or operations such as trains meeting or passing. Given the variety of possible conditions causing trains to be stopped on a crossing, Union Pacific does not catalog the average time vehicular traffic is delayed by stopped trains.

With that caveat, Union Pacific responds as follows: A.R.S. § 40-852 requires that, except in cases of unavoidable accident, a train blocking a crossing for more than 15 minutes must be cut to facilitate traffic flow. ACC Regulation R14-5-104(C)(7) and Union Pacific's operating practices allow a train to block a public grade crossing for no more than 10 continuous minutes, unless the train is continuously moving in the same direction during the entire time it occupies the crossing, or the blockage is caused by wrecks, derailments, acts of nature, mechanical failure, or other emergency conditions.

Source: **Union Pacific's Engineering, in consultation with TKDA at 750 Shoreline Drive, Suite 100, Aurora, IL 60504, (630) 499-4110**

CW 2.3 Please provide the posted vehicular speed limit for the roads intersecting each crossing covered in this application.

Response:

Crossing	Posted Vehicular Speed Limit
Toltec Road	25 mph*
Houser Road	45 mph*
Battaglia Road	40 mph*
Eleven Mile Corner Road	25 mph*
Main Street	25 mph*
Sunshine Boulevard	35 mph*

* **The speed limits given are those posted for the roads intersecting each crossing. However as a practical matter, maximum speed for vehicular traffic at each crossing itself is limited to 20-25 mph at best because of the stop condition just north of the railroad tracks at Frontier Street.**

Source: **Jennifer Crumbliss, Senior Transportation Engineer with HDR Engineering, Inc. at 8404 Indian Hills Drive, Omaha, NE 68114**

CW 2.4 Please provide information as to whether passenger buses (other than school buses) utilize th[ese] crossing[s] and the number of times a day a passenger bus crosses.

Response: **Union Pacific does not have access to such information, but instead must rely on information provided by others. With that caveat, Union Pacific responds that it is not aware of any public passenger buses that utilize the crossings involved in this application.**

Source:
1) **Christine McMurdy, Public Works Department, City of Goodyear, 190 N. Litchfield Road, Goodyear, AZ 85338, (623) 932-1637**
2) **Karen Thomas, GIS Services Department, City of Maricopa, 45145 W. Madison Avenue, P.O. Box 610, Maricopa, AZ 85239, (520) 568-9098**
3) **Aaron Cart, GIS Department, City of Casa Grande, 510 E. Florence Blvd., Casa Grande, AZ 85222, (520) 421-8625**
4) **Belinda Cota, Planning Department, City of Eloy, 628 N. Main Street, Eloy, AZ 85231, (520) 466-2578**

CW 2.5 Please provide information as to whether vehicles carrying hazardous materials utilize th[ese] crossing[s] and the number of times a day a vehicle carrying hazardous materials crosses.

Response: **Union Pacific has been unable to obtain any information responsive to this request. It is Union Pacific's understanding that any vehicle carrying hazardous materials may utilize public crossings unless otherwise posted, but Union Pacific knows of no way it can investigate or determine whether such vehicles use these crossings or with what frequency.**

CW 2.6 Please indicate whether any spur lines have been removed within the last three years inside a 10 mile radius of any crossings covered in this application. Please include the reason for the removal, date of the removal and whether an at-grade crossing or crossings were removed in order to remove the spur line.

Response: **Using the definition of a "spur line" or "spur track" as "a stub track of indefinite length diverging from a main track or other track," ACC Regulation R14-5-101(20), no spur lines have been removed within the last three years inside a 10-mile radius of any crossings covered in this application.**

Source: **Union Pacific's Engineering**

CW 2.7 Please indicate which, if any, spur lines have been removed within the last three years inside a 10 mile radius of any crossings covered in this application were done at the direction or request of (1) the relevant road authority, (2) the industry served by the spur line, or (3) by the railroad.

Response: **Not applicable. See Response to CW 2.6.**

ORIGINAL AND THIRTEEN COPIES
of the foregoing filed this 14th day of
March, 2008, with:

Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

COPY of the foregoing e-mailed and
mailed this 14th day of March, 2008, to:

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Legal Division
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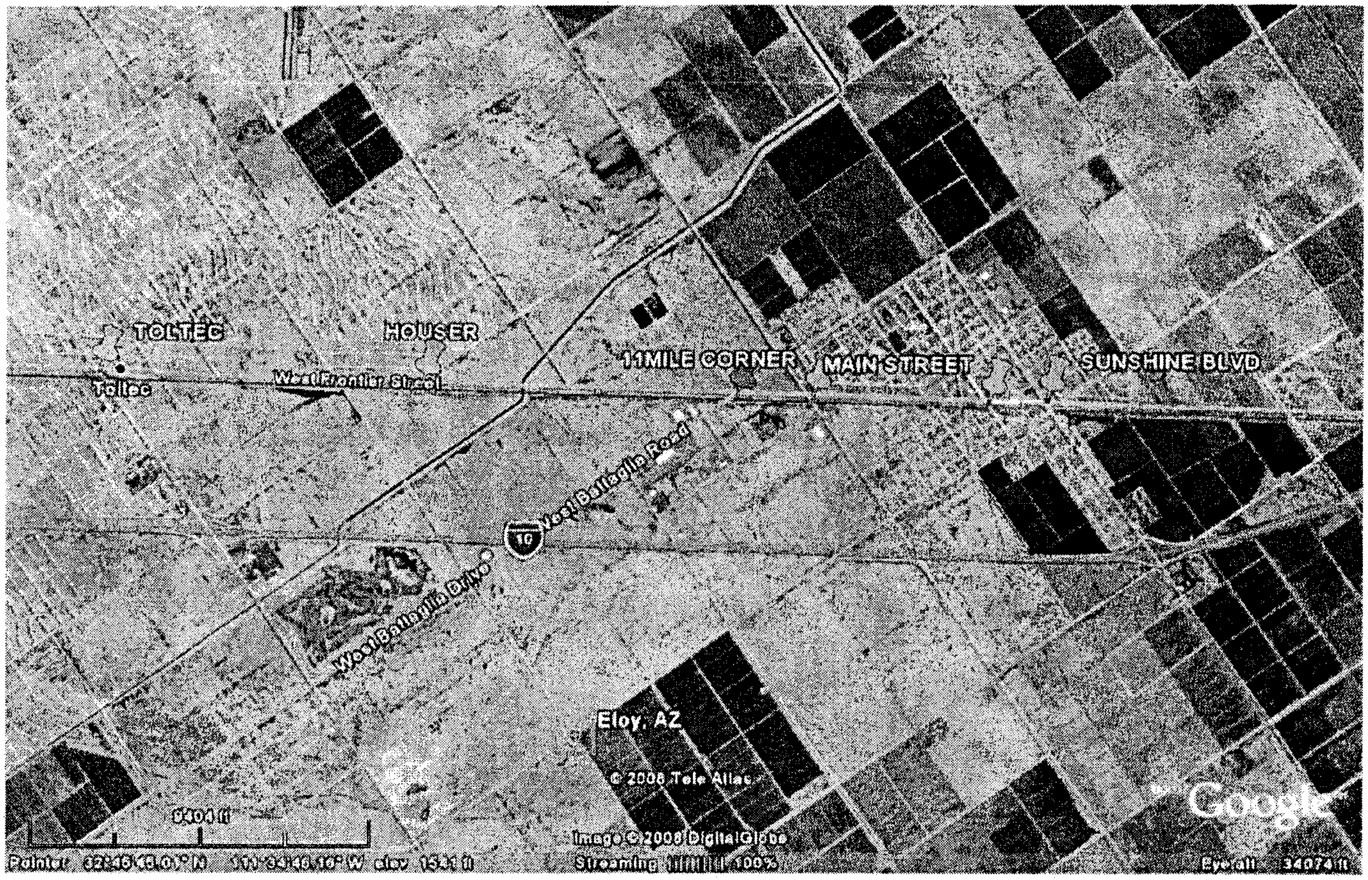
Dan Norkol

Appendix : A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HOUSER
Toltec
West Frontier Street
11MILE CORNER
MAIN STREET
SUNSHINE BLVD
West Battaglia Road
10
West Battaglia Drive
Eloy, AZ
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